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ABSTRACT

Children who are referred to mental health clinics in the preschool years pose problems for diagnosticians because of the lack of standardized instruments for assessing personality and measuring behavior of preschoolers. In response to this problem, the Children's Behavioral Classification Project has been extended into the preschool years and the Preschool Behavioral Classification Project form (PBCP) has been developed. When completed, the PBCP contained 268 behavioral items and five demographic variables (age, sex, race, socio-economic level, and clinic-nonclinic status). The PBCP was then administered to the 1350 parents. Twenty-two major factors were produced in the statistical analysis. Examples of factors produced include: sexual curiosity; disobedience; direct aggesssion; verbal hyperactivity; separation anxiety; positive social orientation; perserverance; and sociability. Presently, the test-retest reliability of the instrument is being determined. With respect to future research norms will be established for each factor for each age. Other studies which will be carried out include validity studies, reliability studies, and longitudinal studies. Eventually the focus of the research will concentrate on the use of the PBCP in evaluating the efficiency of therapeutic programs. (MLP)

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Preschool Behavioral Classification Project[1]

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The Children's Behavioral Classification Project (or CBCP) which has been described earlier and which will be described in more detail later was designed to assess problem and non-problem behaviors of children from six to thirteen years of age. This report describes the extension of the project into the preschool years and the development of the Preschool Behavioral Classification Project form, or the PBCP.

The target population for the PBCP included children from four to six years of age. It was recognized that children in this age range comprise a very small percentage of patients in mental health clinics; yet, this fact does not mean that preschoolers do not have difficulties or exhibit problem behaviors. It is evident from the research of Macfarlane et al (1962) that preschool youngsters do have numerous problems, and that oftentimes the child not referred to mental health clinics have as many or more difficulties than those children who are seen by mental health workers. It appears that some children, perhaps a majority of those with rather serious problem behaviors, are not referred until after some problems have existed for some time, usually after the child enters school.

Those who are referred or brought to clinics in the preschool years pose numerous problems for diagnosticians because of the relative lack of standardized instruments for assessing personality and measuring

behavior of preschoolers. This is especially true for the child who has a speech problem or who is non-verbal, hyperactive, or distractible. The BPCP was developed to assess the child's behavior in a number of areas, for it is behavior itself which results in the youngster being brought for psychological help. Also, it attempts to take into account the description of the child's behavior from those individuals who are most familiar with the child, the parents themself.

Method

PBCP Development

Very briefly, the following procedure was used in the development of the Preschool form. Since over a decade of work had gone into the development of the CBCP, and all 274 items had been carefully screened by numerous individuals, the decision was made to use the form as a base in extending the project to younger children. Consequently, over 300 CBCP forms were given to parents or parent-surrogates of four, five, and six year olds, and 183 usable forms were returned. A frequency count of endorsements of each item was then made. The elimination of items from the CBCP was based upon a statistical and logical analysis, that is, those items endorsed less than one in ten times, if deemed inapplicable to four, five, and six year olds on a logical basis, were eliminated.

New items to replace the 91 eliminated to changed items came from the following sources: (a) variables previously considered for the CBCP but not included in the form; (b) presenting problems of children seen in clinics; (c) the literature; (d) other children's tests and (e) an interdisciplinary committee composed to numerous specialists who were familiar with children's behavior. When completed, the PBCP contained 268 behavioral items and five demographic variables (age, sex, race, socio-economic level, and clinic-nonclinic status).

The PBCP was then administered to approximately 1350 parents in three states (Georgia, Illinois, and Louisiana) and 668 completed and usable forms were returned. Children of each sex and of different races were included, and the respondents ranged from the highest to the lowest-socio-economic level. Additionally, a comparatively small clinic population was included.

Statistical Analysis

For major analysis, all data from the 668 Ss were pooled and factor analyzed by the modified Vanderbuilt program which is the same program used in the analysis of the CBCP. The VANDFACT program which is available in the Louisiana State University Computer Center provides for the extraction of up to 30 factors.

A preliminary screen test of the latent roots of the items indicated that 22 of the 30 factors were significant. An examination of the factors to determine if each made logical and psychological sense revealed that 22 of the factors fit this criterion.

The question arose as to whether to use the results of orthogonal rotation or those of oblique rotation. Preliminary data analysis revealed that the orthogonal rotation not only reduced the "loading" of those items that did not logically relate to the factors, but it also increased the coefficients of those items which did seem to fit. Additionally, by plotting several factors against one another, it was clear that the best fit for all data was afforded by orthogonal rotation.

Results

Of the twenty-two major factors which were produced in the analysis, twenty-one had interitem reliability coefficients of .83 or better; the twenty-second factor had a coefficient of .70.

Some of the factors are bipolar in that both positively and negatively correlated items comprise the factors; whereas, other factors are represented by single poles. However, since all factors are logically bipolar in that the behaviors are either present or absent in the behavioral repertoire of the youngster, the naming of each factor was done with respect to the general dimension reflected.

Examples of factors produced in the analysis which need very little description are:

Factor B: Intelligence and Cultural Development - a dimension correlated with race and socio-economic level which deals with the child's ability to retain and produce information such as his age, birthday, address, etc. and also his ability to handle crayons and pencils.

Factor C: Hearing Problem - a factor which is relatively self explanatory in that it indicates whether or not the youngster is exhibiting behaviors symptomatic of a hearing difficulty.

Factor D: Eating Habits - which deals with the degree of finicky or negativistic eating habits exhibited by the child as opposed to problem free eating habits.

Factor F: Sexual Curiosity - which indicates the child's level of curiosity about sex through his verbal and physical behavior.

Factor H: Disobedience - which measures the extent to which a child obeys or disobeys his parents or other authority figures.

Factor I: Continence - which deals with whether or not the child wets or soils himself.

Factor J: Speech Problem - a factor indicating the difficulty or ease a youngster has in pronouncing words and speaking in general.

Factor L: Cursing - which deals with the amount of cursing done by the child.

Factor P: Sleeping Habits - which indicates whether or not the child has a sleeping problem.

Factor T: Incoordination - a factor dealing primarily with the amount of coordination of fine motor movements.

Factor W: Seizures - a dimension indicating whether or not consulsions and fainting spells are present in the youngster's behavioral repertoire.

The other eleven major factors produced in the analysis require more elaboration, and they are as follows:

Factor A: Direct Aggression - Aggression which is directed primarily toward peers in the dimension outlined in this factor. Apparently the high scoring child lacks the capacity to modulate angry feelings when they are stirred up; the items comprising this factor indicate that he not only physically attacks other youngsters and attempts to inflict pain and injury upon them but he is also verbally aggressive and prone to throw temper tantrums.

Factor E: Projected Aggressive - Items comprising this dimension reflect an accusative, attacking, and paranoic orientation. The high scoring child attributes hostile motives to others and complains that others are against him. Unlike Factor A (Direct Aggression) in which the child directly attacks others, the youngster who scores high on this factor does not inflict pain on others but strikes out verbally instead. Examples of items within this factor are: 'Says that other don't like him or that others like to do mean things to him or that others say bad things about him' and 'complains that "nobody loves me"', both of which correlate .55 with the overall factor.

Factor G: Verbal Hyperactivity - The behavioral dimension indicated here is that of verbosity, or a strong tendency to interact or deal with the environment in a verbal manner. Constantly talking or asking questions, not for the sake of engaging in conversation with others, but as an end in itself, seems to be the implied aspect of this factor as exemplified by such items as, 'others say he never seems to stop talking' which has a correlation coefficient of .54 and ' chatters or keeps talking, or interrupts conversations' which has a .46 correlation coefficient.

Factor K: Separation Anxiety - The child who scores at the extreme here seems to resist any change in his environment. He is closely bound to his mother and can be characterized as fearful, desurgent, and clinging. When there are events

which upset the status quo, he reacts by somatizing. The particular type of somatization involves the gastro-intestinal system, and it includes such behaviors as complaining of stomach aches, getting sick, or throwing up his food.

Factor M: Positive Social Orientation - Affection, appreciation, empathy, and "warmth" stand out as the underlying entities of the child who gets a high score on this factor. His actions suggest that he feels fairly comfortable in social relationships, whether with family members or others.

Factor Q: Oral Sexuality - For this dimension, the high scoring child is one whose behavior is directed toward seeking tactile stimulation or possibly contact comfort. There appears to be a need to incorporate things into the body, either orally or via the sex parts, or else to cling to people. It is the primitive mode of seeking affection which suggests the regressive, narcissistic features of the high scoring child. Some sample items include: 'eats such things as chalk or crayons'; 'spends a great deal of time posing, or looking in the mirror'.

Factor R: Blamavoidance - The behavior denote what the name implies; that is, the child seeks to avoid blame and exposure at practically any cost. He is prone to lie and he will place blame on others easily as can be seen in items such as 'tells lies and untruths', 'says another child did the things of

which he is accused; and says other children make him do wrong things.'

Factor U: Isolative Organicity - This factor and the next one, Factor V, seem to depict organic states. More than incoordination is conveyed for there are spasms, repetitive arm and hand movements, and peculiarity in gait involved. Combined with possible neurological damage is the behavioral trait of not talking to others and not playing with peers. Since the youngsters who scores high on this factor does not socialize with others, the term "isolative" was added to the name.

Factor V: Dereistic Organicity - As in Factor U, organicity and lack of a social orientation characterized the child. In this factor some of the behaviors (for example, 'even when alone he pretends to be an animal or make-believe person for a long time (just about every day for a week or more)' and 'sits and rocks for long periods of time' are very similar to those exhibited by autistic youngsters although there are numerous other characteristics of the autistic child not listed here. In any event, there does appear to be a withdrawal by the child from his environment and a tendency to retreat into his own fantasy world.

Factor Z: Perseverance - The temperamental quality measured by this factor is the child's ability to concentrate on tasks and persevere until completion of them. The child who scores high on this factor can be characterized as distractible, somewhat hyperactive, and low on attention

span; thus, he is apt to begin many tasks but rarely complete them. At the opposite pole is the child who does persevere in doing tasks. This activity seems to generalize to other areas, for the youngster is obedient, he takes care of property and his appearance, and he is able to persevere in his play as well as his work.

Factor AB: Sociability - As distinguished from positive social orientation, sociability refers to the ease or difficulty the child has in adapting or adjusting to new social situations. At one extreme, timidity, desurgency, and obsequiousness characterize the child. At the other extreme, social boldness and adaptability to new situations are the major features. It appears that the one characteristic which underlies the total factor is that of degree of assertiveness; that is, the degree to which the child takes an active role in various situations.

These, then, are the 22 major factors produced. There were five other factors produced in the analysis which are not as clearly delineated as the ones just presented; nonetheless, they contain items or reflect dimensions which are of importance. Briefly these factors are: Factor O: Identity Problem - a factor which seems to deal with the sexual role the child assumes as demonstrated in his activity; Factor S: Imaginary Playmate - practically a singlet which indicates whether or not the child has an imaginary playmate; Factor X: Oral-nasal Behavior - perhaps an index

of manifest anxiety as reflected in the child's picking his nose, the biting of nails, palms and fingers, and the eating of nose pickings; Factor Y: Spasms - a factor which deals with the jerking or twitching of various parts of the body; and Factor AD: Singlet - an unnamed factor which may denote the sexualization of anxiety.

Current and Future Research

Of the 273 items on the PBCP, 37 did not correlate well with any factor; consequently, these items have been replaced by new ones. At present, approximately 800 more samples have been gathered and the data is being analyzed for cross-validation purposes. In addition, approximately 60 children in this sample of 800 are being retested to determine the test-retest reliability of the instrument, and these results should be available in the near future.

With respect to future research, obviously, to be a meaningful diagnostic instrument, norms will have to be established for each factor for each age. Scale scores will be derived, therefore, of necessity, a great deal more data from different parts of the country will be required. Mean scores will be computed and standard deviations derived, so that scale scores for each factor will be equated with all other factors. There are numerous other studies which will be carried out, including among others validity studies, reliability studies, matching the PBCP and CBCP by employing consequence coefficients, and longitudinal studies.

In the initial stages of this project attention was given primarily to developing an instrument which could be used as a diagnostic instrument. However, our interest has been turning more and more toward another

area, that being program evaluation or goal-attainment scaling. Once we are satisfied that the PBCP can be used effectively as a diagnostic tool, and possibly as a device for the early detection of problem behaviors in preschoolers, the major emphasis will be shifted toward using the instrument, or at least a significant number of items from the form, in evaluating the efficacy of therapeutic programs designed to alleviate problem behavior in children. It is, after all, the observations of behavior which lead parents, parent-surrogates, teachers or others to assume that a youngster has a problem severe enough to warrant professional help. And, whether or not one considers behavioral problems as being "symptomatic" of underlying difficulties, and whether one uses a behavioristic, analytic, or humanistic approach in dealing with the difficulties, it is the youngster's behavior which will serve as the best indicator of the effectiveness of therapeutic intervention. By obtaining objective measures of behavior before and after treatment using instruments such as the PBCP, the mental health worker should obtain a clean picture of his effectiveness in the delivery of health services.

1. This paper is one of three read at a symposium entitled "The Behavioral Classification Project" presented at the American Psychological Association 81st annual convention, Montreal, 1973.